

others were observed in the wild rice as far out from *terra firma* as it was felt advisable to go.

From my experience with *attenuatus* I can heartily endorse Rehn and Hebard's characterization of it as the most alert and active of all the species of its genus. It was strenuous work collecting the specimens secured, about two out of every three of the individuals I attempted to capture escaping either, as in the case of the males, by leaping swiftly from plant to plant, or, in the case of the females, by leaping once and then, with little or no pause, dropping down into the deepest recesses of the vegetation where it was exceedingly difficult to find them.

Notes on Coleoptera in Pennsylvania, New York and Connecticut.

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Persons interested in collecting and rearing insects usually accumulate a store of miscellaneous information which would be of the greatest value to others, if recorded, but which is seldom put forth on account of its fragmentary nature. The following collection of notes of this type includes facts or records and observations made by the authors or by others to whom due credit is given.

CURCULIONIDAE.

Hormorus undulatus Uhler.—The account of this species by Dr. W. E. Britton in his Fifth¹ Report was overlooked by Blatchley and Leng² who do not record a food habit. Britton states, "On May 15th, we noticed that the leaves of lily of the valley plants growing in the garden had been eaten in a peculiar manner. Notches had been eaten into the edges of the leaves. A number of Curculionid beetles were captured while at work on the leaves which were identified as *Hormorus undulatus*. A photograph of the injury is shown on Plate VI."

Since that record was published the authors have observed this work on Solomon's seal and false Solomon's seal. These plants are probably the native food plants. On May 18th at Rockville, Pennsylvania, injury to the leaves was observed and adults were

¹Rept. Conn. Agr. Exp. Station, 1905, 259.

²Rhynchophora N. E. Am., 100.

taken feeding in the manner described by Britton. Also observed on these plants at various other localities in Pennsylvania and in Connecticut.

Phytonomus meles Fab.—This imported species has not yet been recorded from Pennsylvania. It is represented in the collection of the Bureau of Plant Industry from Cresco, Pa., VI-2-18, coll. by H. B. Kirk; Roxborough, Pa., VI-6-11, F. Haimbach, collector.

Dorytomus indifferens Casey, identified by Prof. H. C. Fall. This species was beaten from *Salix* spp. on June 26th at Harrisburg, Pa., and was exceptionally common.

Dorytomus subsimilis Blatchley. Identified by C. A. Frost as nearest this species. Poplar catkins collected by C. N. Greene were infested heavily by Curculionid larvae. The larvae left the catkins and entered the ground about April 10th. One adult reared.

Otidoccephalus myrmex Hbst. In Blatchley and Leng, Rhyn. N. E. Am., this species is recorded as abundant on hickory, grape, hazel, oak and other plants.

The sycamore trees in the vicinity of Harrisburg are attacked by the sycamore blight.

"This disease is common over the eastern range of the sycamore, and in some sections it kills back the young twigs so severely each spring that a pronounced zigzag branching habit results. The fungus, *Gnomonia veneta*, is a bark parasite, which is most active in the period between the beginning of spring warmth and the advent of cambial growth, which soon becomes sufficiently rapid to bar further progress down the twigs. Later on, in summer, there are produced in the bark of the twigs already killed the characteristic pimple-like pustules of the fungus, from which the creamy spore masses ooze in wet weather."

These dead or dying twigs are in turn attacked by *Otidoccephalus myrmex* and it is possible that they do their part in spreading the disease. It would be of interest to know if this condition exists in other localities where this blight occurs. Nearly every dead twig examined contained from one to four larvae of this beetle and occasionally the larva of *Leioptus alpha*. They all work in the slender blight-killed stem, completely hollowing it out. The adults of *Otidoccephalus* upon emerging in confinement, glass jars being used for cages, feed upon the fungus pustules on the bark, chewing off the top of the pustule, leaving a round scar. W. A. McCubbin, Plant Pathologist of the Bureau, to whom these specimens were submitted,

³This account of sycamore blight by W. A. McCubbin, Bur. Pl. Industry.

verified the observation and noted that he had observed similar eating out of the pustules of *Valsa leucostoma* on peach twigs by an unidentified insect.

The *Leiopus* (*Leiopus alpha* Say, identified by Prof. H. C. Fall who states—"Is unquestionably like the specimen on the label *L. alpha* in the Leconte collection.") which emerge much later than the *Otidoccephalus* and in considerably less numbers is also mycophagous, eating the pustules in a similar manner to *Otidoccephalus*. This habit of *Leiopus* has been noted by Dr. F. C. Craighead and others in relation to chestnut blight and other fungi.

Magdalis perforata Horn. Reared from *Pinus*, Charter Oak, Pa., VI-22.

Magdalis inconspicua Horn. Reared from *Fraxinus*, New Cumberland, Pa., Kirk and Champlain.

Baris interstitialis Say. Harrisburg, Pa. "Taken as adults from the roots of *Xanthinum strumarium* all winter." V. A. E. Daecke.

Baris scolopacea Germ. Harrisburg, Pa. Reared from *Chenopodium* sp., lamb's quarters, larvae work in pith.

Cylindrocopturus binotatus Lec. Reared from *Rhus glabra*, Harrisburg, Pa.

Conotrachelus juglandis Lec. "Known as the 'walnut curculio,' occurring on walnut, butternut and hickory, the larvae breeding in the green fruit," Blatchley and Leng. We are of the impression that the record from hickory refers to another species.

The fine paper⁴ by W. E. Britton and H. B. Kirk was overlooked by Blatchley and Leng. Here we find the species recorded as feeding and living in the stems as well as the fruit of six species or varieties of walnut. We wish to record the fact that we have observed the same thing in Pennsylvania, the leaf stems of walnut and butternut being attacked as well as the fruit.

Conotrachelus elegans Boheman.—W. D. Pierce writes⁵ "Is a very important enemy of nuts. In Texas the first generation breeds in the petioles and new shoots of hickory. Later individuals are found in the leaf galls of *Phylloxera devastatrix* on pecan. Still later in the season the species is bred from the nuts of various species of *Hicoria*."

In Pennsylvania, Long Island and Connecticut it has but one generation as far as we have observed. The injury is confined to the new growth and leaf stems; we have not observed infested nuts.

⁴Rep. Conn. Agr. Exp. Sta., 1912—240.

⁵Proc. Ent. Soc. Wash. Vol. XVIII, 1916, p. 9.

The adults were first observed at Westbury, New York, May 25. Both sexes were observed upon the foliage and new growth, feeding, mating and egg laying. They were very abundant, five or six examples occurring on one stem. The adults damage the stems in feeding and in making egg punctures which are sometimes so plentiful as to cause the stem to wilt. The eggs hatch about ten days after being deposited. The larvae work in the shoots and leaf stems, making holes and mines that weaken them. When severe, the new growth dies and the leaves wilt or the weakened stems blow off or the conditions are attractive for other insect trouble or fungus disease. About the last of July the larvae are full grown and leave the stems and go into the ground.

Cryptorhynchus fallax Lec.—Reared from *Quercus alba* and *Cercis canadensis*. Hummelstown, Pa., VIII-3, VIII-22—Kirk and Knoll.

New Records of Aquatic Hemiptera for the United States, with Description of New Species.

By J. R. DE LA TORRE-BUENO, White Plains, New York.

Prof. H. B. Hungerford, of the University of Kansas, sent me a number of odd water-bugs for examination. These present a number of new and noteworthy occurrences, some being recorded for the first time from the United States, to which special attention should be drawn through a separate note, rather than to lose them in a general paper on a group.

Buenoa elegans Fieb. Cherokee County, Kansas, Aug., 1920. (Hungerford and Beamer). First record for the State.

Buenoa margaritacea Bueno. Cherokee County, Kansas, Aug., 1920. (Hungerford and Beamer). Another first record.

Ranatra kirkaldyi Bueno. Cherokee County, Kansas. (Hungerford and Beamer). This likewise is new to Kansas.

It may not be amiss to comment here on the validity of this species, in advance of a future careful analysis of the genus. Prof. Montandon, without knowing the species in nature, proceeds to synonymize it (1910, Bull. Soc. Sci. Buc., xviii, 183) with *R. fusca* P. B., in which, naturally, Van Duzee follows him in his Catalog (1917, p. 462). However, there are specimens in the U. S. National Museum named *fusca* P. B. by Prof. Montandon, which are the same form I recognize as Palisot